Docket No.: BSWV-P01-002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Clancy et al.

Confirmation No: 1497

Application No.: 10/018127

Art Unit: 1641

Filed: May 13, 2002

Examiner: Lisa V. Cook

For: METHOD OF DETERMINING POTENTIAL SUSCEPTIBILITY TO DEVELOPMENT OF ALTE AND/OR SIDS

REPLY TO RESTRICTION REQUIREMENT

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This reply is being filed in response to the outstanding Restriction Requirement, mailed on March 28, 2005, in connection with the above application. A petition for a one-month extension of time and appropriate fees are being filed concurrently herewith.

Applicants hereby elect, with traverse, Group II (claims 21-36), drawn to a method of assessing potential development of ALTE and/or SIDS via the detecting of IgA1. Applicants traverse the restriction requirement for the reasons which follow.

First, claim 21 of Group II shares a common technical feature with claims of Groups I, III, and V, namely, determination in a sample (e.g., unstimulated saliva) from a subject (e.g., an infant) of IgA or IgA1 level. Thus, Groups I-III and V could be examined simultaneously without significant additional burden on the Examiner. According to MPEP §803, two criteria must be met for a proper restriction requirement: i) The inventions must be independent or distinct as claimed; and ii) There must be a serious burden on the Examiner if restriction is required. Applicants respectfully submit that in this case, the Examiner has not shown that there would be a serious burden in examining Groups I, III, and V together with Group II. Thus, these

inventions (at least those of Groups I-III) can be efficiently searched and examined together without placing a significant additional burden on the Examiner.

Second, Applicants submit that the Examiner's restriction of claims 20-37 and 39 into Groups I-III and V is arbitrary. Claim 20 encompasses subject matter based on a method for assessing potential susceptibility to development of ALTE and/or SIDS in a subject. The scope of claim 20 is broader than and encompasses the subject matter of Groups I-III. Accordingly, Applicants submit that claim 20 is a linking claim for at least Groups I-III. Applicants respectfully remind the Examiner that, in accordance with MPEP 809, "should any linking claim be allowed, the restriction requirement must be withdrawn."

The Examiner appears to take the position that the feature linking the inventions of Groups I to V is "the correlation or detection of IgA in disease such as sudden infant death syndrome (SIDS)" and that this does not provide a "contribution over the prior art" given the disclosure of Stoltenberg et al. (*Pediatric Allergy and Immunology (1995)*) which teach IgA detection in SIDS. See Office Action, page 2, lines 6-12; page 3, 6-10. Applicants respectfully disagree for the reasons that follow.

The disclosure of Stoltenberg et al. relates to post-mortem studies in SIDS infants that examined the presence of IgA, IgM, IgD, and IgG in the crypt, reticular epithelium, interfollicular area, mantle zone, and germinal centre of tonsillar tissue. Applicants note that in Table 2a and at page 52, col. 1, lines 3 to 11, although the total number of IgA immunocytes was found to be higher in the SIDS infants compared to controls, no difference could be demonstrated in the mantle zone or in the reticular epithelium. Therefore, it is clear that elevated levels of the IgA immunocytes were not consistent and the findings of this post-mortem study would not in any way provide a hint to one skilled in the art that IgA levels could be used as a predictor or susceptibility to ALTE/SIDS.

Applicants further note that no significant difference was demonstrated in the total number of IgM immunocytes in SIDS tonsils, which appears to be in conflict with other prior art in which IgM levels were found to be elevated in SIDS infants (*Journal of Pathology*, GB 177 December 1995, pages 415-421 and *Pediatric Research*, Williams & Wilkins, US vol. 6, no. 33, 1993, pages 554-556; both articles are cited in the International Search Report). Further, the

authors of the citation at page 53, col. 1, lines 34 to 43 state that before an attempt is made to analyze the results, the following must be considered, namely, that previous investigators have shown large individual variations in results, rapid changes with age and even that "different lymphoid compartments may vary considerably from one specimen to another." Hence, it is clear that a skilled artisan would not be motivated by the disclosures of this citation which are at odds with the literature of the time and specifically emphasize the difficulties of dealing with inter-individual variability.

In addition, the authors of the citation at page 53, col. 2, lines 50 to 59 of the citation state that the tonsillar immune response demonstrated in the citation would cause the release of several cytokines and, further, that it has been suggested that interleukin-1β may be the intermediary causing SIDS during a respiratory infection. Accordingly, the citation reiterates the conventional thinking in the art at the filing date of the present application, namely, that cytokines such as interleukin-1β play a major role in SIDS. Thus, a skilled artisan would be led to focus on the role and levels of such cytokines rather than secreted levels of IgA as recited in the present invention.

In sum, Applicants submit that, contrary to the Examiner's assertion, the feature linking the pending claims is novel and inventive over the cited prior art because (a) the Stoltenberg et al. citation relates to post-mortem studies, not to prediction of susceptibility to ALTE/SIDS; (b) this citation provides information that is in conflict with other reports; (c) by the admission of the authors themselves, analysis of the results must be considered in light of large individual variations and rapid changes with age; (d) this citation appears to point to interleukin-1β as being the relevant intermediary; and (e) there is no hint in this citation that IgA would be a useful predictor of ALTE/SIDS in "live" children. Accordingly, while IgA may have been measured in these SIDS victims, it was not measured in "live" children to determine potential susceptibility to ALTE/SIDS and there is nothing in the citation that would motivate the skilled artisan to use IgA as a predictor of ALTE/SIDS.

In view of the above, Applicants respectfully submit that the inventions of at least Groups I-III are closely related and thus can be efficiently searched and examined together without placing a significant additional burden on the Examiner.

CONCLUSION

The Examiner may address any questions raised by this submission to the undersigned at 617-951-7000. Should a further extension of time be required, Applicants hereby petition for same and request that the extension fee and any other fee required for timely consideration of this submission be charged to **Deposit Account No. 18-1945, under Order No. BSWV-P01-002.**

Dated: May 25, 2005

Respectfully submitted,

By _____
Z. Angela Guo
Registration No.: 54,144
ROPES & GRAY LLP
One International Place
Boston, Massachusetts 02110-2624
(617) 951-7000
(617) 951-7050 (Fax)
Attorneys/Agents For Applicant